

Piezoelectricity Testing Capability Overview

| Piezoelectricity | Capability Description | | Solvay Labs |
|--|------------------------|--|---------------|
| Electrical Poling | Electrode Preparation | <ul style="list-style-type: none"> - Printable Area * Substrate < 0.5 mm thickness: 210 mm x 315 mm * Substrate 0.5 – 25 mm thickness: 210 mm x 260 mm * 300 ~ 600 nm electrode thickness per layer - Commercially available Inkjettable silver inks * Sun chemical Suntronic * Genes'ink Nano silver Ink * Hareus Pedot PSS HC * Agfa Pedot PSS | R&I Bollate |
| | Contact Poling | <ul style="list-style-type: none"> - Contact poling voltage: up to 10 kV - Contact poling frequency: DC to 5 kHz, existing experience at DC - Poling temperature: room temperature - Poling chamber electrodes: 1 ~ 8 cm in diameter | R&I Bollate |
| | Corona Poling | <ul style="list-style-type: none"> - Corona poling voltage: up to 30 kV - Corona poling frequency: DC - Poling temperature: room temperature (high temperature under development) - Poling area: TBD | ADL Alfaretta |
| Piezoelectric Coefficient Characterization | d33 | d33 Measurement of Polymer Films - 0~10, 0~100, 10~1,000, 100~ 10,000 pC/N | R&I Bollate |
| | | d33 Measurement of Polymer Films with control of static force - 1~200, 1~2,000 pC/N - static force 0~10 N | ADL Alfaretta |
| | d31 | d31 Measurement of Polymer Films (under development) | ADL Alfaretta |